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10/593,036	09/15/2006	Kenji Suzuki	1592-0165PUS1	5742
2292 7590 07/16/2009 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747				
EXAMINER				
SAYADIAN, HIRAYR				
ART UNIT		PAPER NUMBER		
2814				
NOTIFICATION DATE		DELIVERY MODE		
07/16/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

## DETAILED ADVISORY OFFICE ACTION

### Response to Applicant's Arguments

1. The arguments in the 6/19/2009 "Reply" after the 3/19/2009 Final Office "Action" have been fully considered. These arguments however are not found persuasive because they repeat arguments, which the Action addressed.

The Reply specifically recognizes (see, for example, the first full paragraph on page 3) that haze (as reflection of the surface of the substrate) is to imperfections of the surface, either dislocations or the finish. The Reply therefore confirms the reasoning applied in the Final Office Action (see, for example, paragraph number 2) of the Final Office Action.

The Reply however contends that neither Oida nor Nakamura would anticipate because the applied prior art is 10 years older than the present invention and therefore the "usual" methods of production and polishing used by this application is not that of the applied prior art.

The Reply also contends the applied prior art fails to anticipate because research into reducing haze by improving polishing did not start "until around the mid-1990s." Indeed the Reply states that "mirror polishing methodology sophisticated enough for the substrate to realize 'the haze is not more than 2 ppm' was not practiced before the 2000s." See the third paragraph in page 3 of the Reply.

At the outset, Examiner notes that the contention about the mid 1900s is merely an attorney argument without the truth of the basis in fact being proven or alternatively affirmed to be true under oath or by appropriate declaration. Such a contention fails to take the place of evidence. See M.P.E.P. § 2145 (I) and (II).

Examiner additionally notes that the Reply recognizes that usual method of mirror polishing for substrate to have haze not more than 2 ppm was known as of the 2000s.

Examiner also notes that the claimed invention is a substrate having haze not more than 2 ppm. The claimed invention is not a method of making a substrate having haze not more than 2 ppm. The scope of claim 1 therefore includes a substrate capable of having haze not more than 2

ppm. At best therefore, the claim is directed to excluding others from substrate having a haze not more than 2 ppm, wherein haze is claimed to be the ratio of intensity of scattered light to intensity of incident light.

The Reply rightly fails to challenge the number of dislocations in the prior art disclosed InP substrates being less than that disclosed by this application. Without proving the haze of the prior art substrates is not more than 2 ppm, the Reply limits the challenge of the prior art solely to whether the mirror finish/polish disclosed by the prior art would have been sufficient to have the substrate have haze less than 2 ppm.

Examiner notes that this application fails to describe the polishing process of this application other than that the "[s]urfaces of the InP single crystal substrates were subjected to mirror polishing by a usual method." See paragraph [0036] of the PGPUB of this application. This fails to describe the "usual method" to polish the substrate the present application, let alone distinguish it from the usual mirror finishing methods used to polish samples of the applied prior art. At best, the contention that "usual method" of this application is not the usual methods of the prior art, in the manifest lack of description of what "usual method" of this application is, if the polishing process or method in this application is new and unusual, then admits failing to meet the requirements of enabling disclosure and description of best mode under 112, first paragraph, as applied to obtaining the claimed substrate. Alternatively, the 112(1) requirement of enablement might be met only by the "usual method" of this application being an old and conventional prior art method of polishing known at least as of 2000.

In either case, the Reply fails to explain (1) why, and how, the claims are not anticipated by the substrate disclosed by the prior arts of Oida and Nakamura, which certainly are capable of being subjected to usual method mirror polishing known at least as of 2000 to have produced not more than haze of 2 ppm; and (2) why it would not be obvious to one of ordinary skill in the art at the time of this application to modify Oida and Nakumara (in view of Westhoff, Takahashi, Short, and Born & Wolf) by using a usual prior art method of polishing (available at least as of 2000) for its art recognized intended suitable purpose of producing substrate haze not more than 2 ppm.

Accordingly, keeping in mind the explicit recognition in the Reply (that improvements in polishing processes to lower hazing due surface polish started in mid nineties, and at least as of 2000 methodology was known to polish substrates having haze not more than 2 ppm), and noting that Nakamura and Oida were mid-nineties patents, then the Reply fails to convince that the mirror finish disclosed by the applied prior art fails to produce haze not more than 2 ppm, or that it would not have been obvious to use a usual prior art known method of polishing for its intended art recognized suitable purpose of polishing the substrate to obtain not more than 2 ppm.

#### CONCLUSION OF DETAILED ADVISORY OFFICE ACTION

2. The shortened statutory period for reply to this Office Action expires **THREE MONTHS** from the mailing date of the 3/19/2009 Final Office Action. Applicant is reminded of the extension of time policy as set forth in 37 CFR § 1.136(a). In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this Office Action.

Any inquiry concerning this communication or earlier communications from an Examiner should be directed to Examiner Hrayr A. Sayadian, at (571) 272-7779, on Monday through Friday, 7:30 am – 4:00 pm ET.

If attempts to reach Mr. Sayadian by telephone are unsuccessful, his supervisor, Supervisory Primary Examiner Wael Fahmy, can be reached at (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available only through Private PAIR. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. The Electronic Business Center (EBC) at 866-217-9197 (toll-free) may answer questions on how to access the Private PAIR system.

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/Wael M Fahmy/

Supervisory Patent Examiner, Art Unit 2814